

## MARS-3 matrix radiometric system for RATAN-600

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### Abstract

The MARS-3 third-generation matrix radiometric system has been developed, manufactured, and is currently being used in observations within the framework of the "Cosmological Gene" program. The system is based on new hardware components and consists of 16 independent radiometers (32 horns with a step of 20 mm). Each pair of horns is connected to the input of an amplifier unit via a square-loop modulator. The parameters of each radiometer are: central frequency, 30.0 GHz; bandwidth, 5GHz; average noise temperature of the system, 250 K; and a sensitivity of about 5 mK for  $\tau = RC = 1$  s. © 2012 Pleiades Publishing, Ltd.

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### Keywords

instrumentation: detectors